

REMARKS

Reconsideration of the application in view of the above amendments and the following remarks is requested. Claims 30-38 are in this application. Claims 1-29 have been cancelled. Claims 30-38 have been added to alternately and additionally claim the present invention.

The present divisional application was filed with copies of the 6 informal sheets of drawings that were originally filed in the parent application, along with 5 sheets of formal drawings. As a result, it is not clear which set of drawings (informal or formal) has been approved by the Examiner. Thus, applicant requests that 6 informal sheets and the 5 formal sheets of drawings filed with the divisional application be replaced with the 5 replacement sheets attached in Appendix A. The 5 sheets of replacement drawings are the same as the formal drawings filed with the divisional application.

The Examiner rejected claims 10-19, 21-22, 24-25, and 28-29 under 35 U.S.C. §102(e) as being anticipated by Banerjee et al. (U.S. Patent No. 6,707,132 B1). As noted above, claims 10-19, 21-22, 24-25, and 28-29 have been cancelled. For the reasons set forth below, applicant respectfully traverses this rejection as applied to new claims 30-38.

Claim 30 recites, in part:

“forming a first material on the top surface of the semiconductor material;  
“removing a portion of the first material to expose a region of the top surface of the semiconductor material and leave a remaining portion of the first material on the top surface of the semiconductor material;  
“forming a semiconductor layer of the first conductivity type on the top surface of the semiconductor material, the semiconductor layer including silicon, germanium, and carbon;  
“removing the remaining portion of the first material from the top surface of the semiconductor material;  
“forming a layer of insulation material over the semiconductor layer;  
“forming a layer of conductive material on the layer of insulation material; and  
“removing a portion of the layer of conductive material to form a gate.”

Turning to Banerjee, FIG. 2 shows an oxide layer 32 and a nitride layer 33 formed on the top surface of substrate 34. Following this, as shown in FIG. 4 of Banerjee, a portion of oxide layer 32 and nitride layer 33 are removed to expose a region of the top surface of substrate 34. However, the exposed surface is next etched to form a trench 37 as shown in FIG. 5 of Banerjee, and then filled with an oxide 43 as shown in FIG. 6 of Banerjee.

Thus, if the formation of oxide layer 32 shown in FIG. 2 of Banerjee is read to be the "forming a first material" element required by claim 30, and the removal of a portion of oxide layer 32 shown in FIG. 4 of Banerjee is read to be the "removing a portion" element required by claim 30, then there is nothing which can be read to be the "forming a semiconductor layer" element required by claim 30 because oxide 43 does not include silicon, germanium, and carbon.

In addition, as shown in FIG. 8 of the Banerjee reference, the remaining portions of oxide layer 32 and nitride layer 33 are removed to expose a region of the top surface of substrate 34. Further, as shown in FIG. 9 of the Banerjee reference, silicon germanium is selectively epitaxially grown on substrate 34 to form layers 51, 53, and 55.

Thus, if the formation of oxide layer 32 shown in FIG. 2 of Banerjee is read to be the "forming a first material" element required by claim 30, the removal of a portion of oxide layer 32 shown in FIG. 8 of Banerjee is read to be the "removing a portion" element required by claim 30, and the formation of layers 51, 53, and 55 are read to be the "forming a semiconductor layer" element, then there is nothing which can be read to be the "removing the remaining portion" element required by claim 30. This is because the remaining portions of oxide layer 32 were previously removed in FIG. 8 of Banerjee, and there is nothing left to remove.

As a result, new claim 30 is not anticipated by the Banerjee reference. In addition, since new claims 31-38 depend either directly or indirectly from claim 30, claims 31-38 are not anticipated by the Banerjee reference for the same reasons as claim 30.

The Examiner also rejected claims 20 and 26-27 under 35 U.S.C. §103(a) as being unpatentable over Banerjee et al. in view of Chu et al. (U.S. Patent Publication No. 2002/0182423). As noted above, claims 20 and 26-27 have been cancelled. In addition, as noted above with respect to new claim 30, Banerjee does not teach the "removing the remaining portion" element because the remaining portions of oxide layer 32 were previously removed in FIG. 8 of Banerjee. Further, since one can not remove a layer that no longer exists, there appears to be nothing in Chu that would teach or suggest this limitation.

As a result, new claim 30 is patentable over the Banerjee reference in view of the Chu reference. In addition, since new claims 31-38 depend either directly or indirectly from claim 30, claims 31-38 are patentable over the Banerjee reference in view of the Chu reference for the same reasons as claim 30.

The Examiner also rejected claim 23 under 35 U.S.C. §103(a) as being unpatentable over Banerjee et al. in view of Kubo et al. (U.S. Patent No. 6,399,970 B2). As noted above, claim 23 has been cancelled. In addition, as noted above with respect to new claim 30, Banerjee does not teach the "removing the remaining portion" element because the remaining portions of oxide layer 32 were previously removed in FIG. 8 of Banerjee. Further, since one can not remove a layer that no longer exists, there appears to be nothing in Kubo that would teach or suggest this limitation.

As a result, new claim 30 is patentable over the Banerjee reference in view of the Kubo reference. In addition, since new claims 31-38 depend either directly or indirectly from claim 30, claims 31-38 are patentable over the Banerjee reference in view of the Kubo reference for the same reasons as claim 30.

Thus, for the foregoing reasons, it is submitted that all of the claims are in a condition for allowance. Therefore, the Examiner's early re-examination and reconsideration are requested.

Respectfully submitted,

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APPENDIX A

AMENDMENT IN RESPONSE TO OFFICE  
ACTION MAILED AUGUST 23, 2005

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